

FORENSIC ARCHAEOLOGY: SEARCH AND RECOVERY

Cliff Boyd, Ph. D.
Anthropological Sciences Program
RU Forensic Science Institute
Radford University

Archaeology

1. Prehistoric Archaeology
2. Historic Archaeology
3. Forensic Archaeology

Forensic Archaeology



Objectives

- Locate the forensic scene (search)
- Record, document forensic scene
- Verify forensic significance
- Minimum number of individuals
- Reconstruct perimortem events
- Reconstruct postmortem events



Important Terms

- ▣ Stratigraphy
- ▣ Datum
- ▣ Context
- ▣ Plan
- ▣ Profile
- ▣ Taphonomy

Phase I: Search, Reconnaissance



Search Techniques

- ▣ Walkover Surveys
- ▣ Aerial (infrared photography)
- ▣ Geophysical Methods
- ▣ Cadaver Dogs

Ground Search

GOOD VISIBILITY



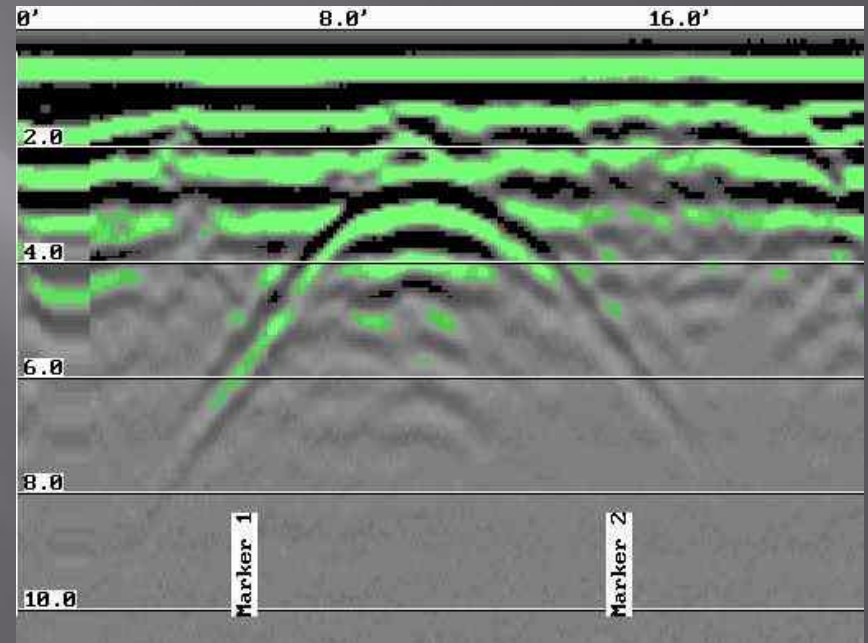
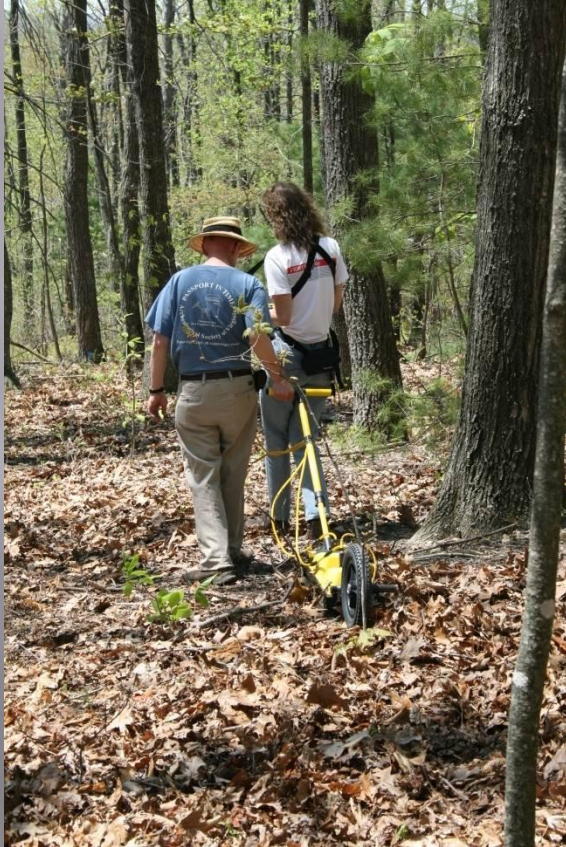
POOR VISIBILITY



AERIAL (INFRARED) PHOTOGRAPHY



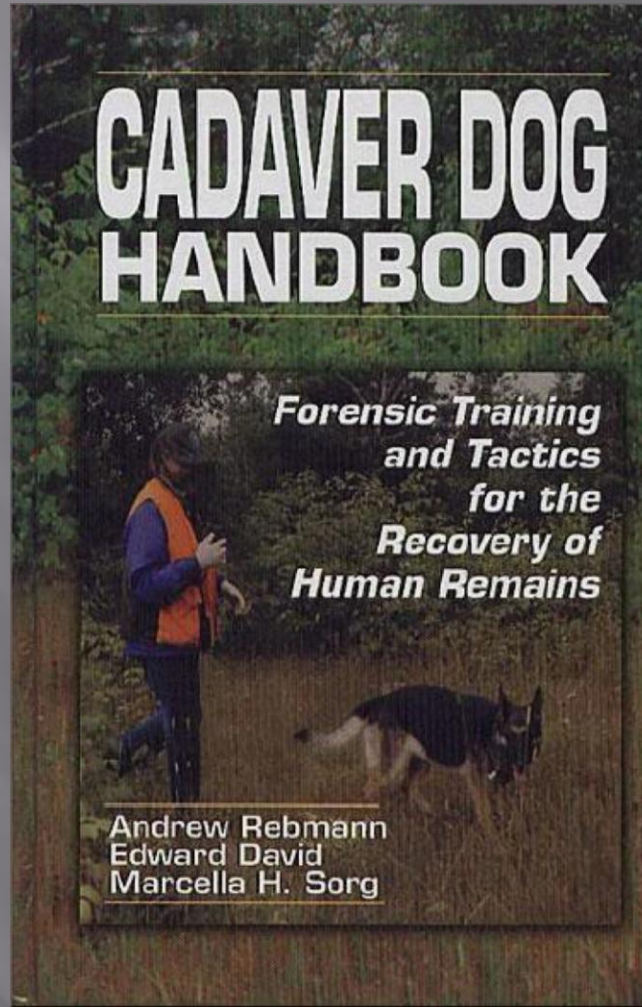
GEOPHYSICAL METHODS: Ground Penetrating Radar



Geophysical Methods: Electrical Resistivity



CADAVER DOGS



Phase II: Determination of Significance



Contemporaneity of Human Remains



Context and Association



Phase III: Excavation, Removal



Surface Remains

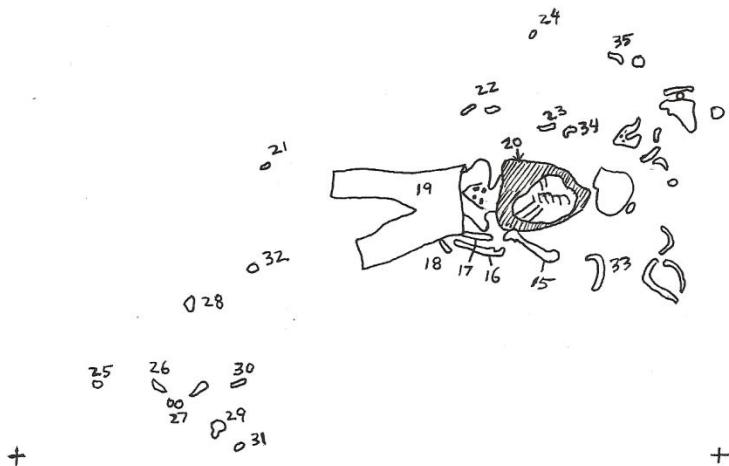


50 cm

+

+

MN



KEY:

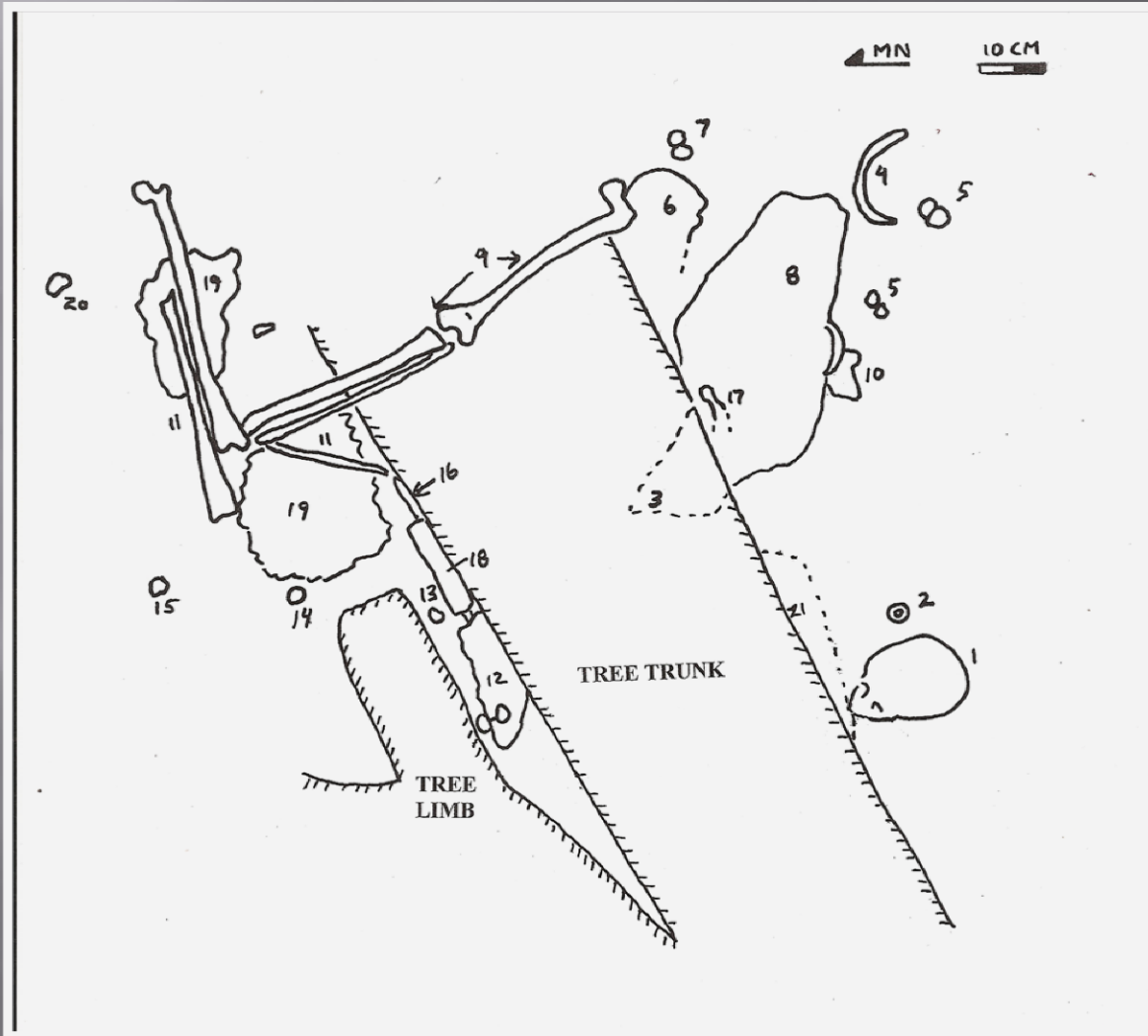
- | | |
|---|--|
| 15. Right humerus | 26. Right metatarsal |
| 16. Right ulna | 27. Right foot cuneiforms, metatarsal |
| 17. Right radius | 28. Right foot phalanx |
| 18. Right hand (except for one carpal) | 29. Right talus |
| 19. Jeans (femora inside) | 30. Right metatarsal |
| 20. Top (with ribs, thoracic vertebrae) | 31. Right navicular (tarsal foot bone) |
| 21. Right distal first metatarsal phalanx | 32. Right cuneiform |
| 22. Left hand phalanges | 33. Right rib |
| 23. Left hand phalanx | 34. Hyoid |
| 24. left carpal (pisiform) | 35. Left hand phalanx |
| 25. Foot phalanx | |

Surface Remains





Field Map of Scene



The Covert Grave



Covert Burials

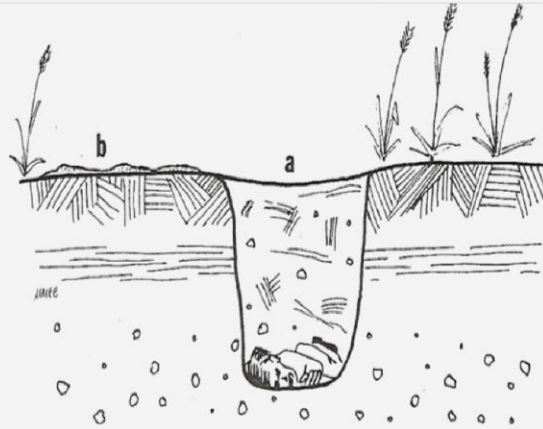


Figure 3.8. The completed grave leaves two areas of plant damage: the grave area itself (a) and the adjacent ground where the fill was piled up (b). (Adapted from McLaughlin, 1974.)

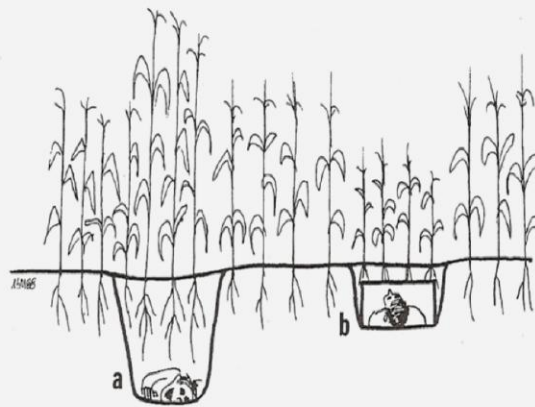


Figure 3.9. The totality of circumstances determine whether a grave will ultimately favor (a) or retard (b) plant growth. (Adapted from Wilson, 1982.)



— E — W Line Level

limit of excavation